

1. (Withdrawn) An apparatus for providing left and right eye images with a horizontal angle of view of at least approximately  $45^{\circ}$  along the axis of a single camera lens, the apparatus comprising optical means arranged to provide said left and right eye images as a pair of head-to-head or toe-to-toe images, i.e. with the two images separated by a center line and with either the tops of the two images or the bottoms of the two images adjacent the center line, so that the left and right eye images can be simultaneously recorded onto a single frame of a photographic film or other recording medium.

2. (Withdrawn) An apparatus as claimed in Claim 1, in which the optical means comprises two reflecting elements for each of the two images respectively, the reflecting elements being positioned in front of a camera lens.

3. (Withdrawn) An apparatus as claimed in Claim 2, in which the reflecting elements comprise first and second reflecting elements arranged to receive the left and right eye images respectively and third and fourth reflecting elements that are arranged to receive said left and right eye images from said first and second reflecting elements and to provide said left and right eye images along the axis of a camera lens.

4. (Withdrawn) An apparatus as claimed in Claim 3, in which the first and second reflecting elements comprise plane mirrors and the third and fourth reflecting elements comprise two faces of a triangular prism, the plane mirrors each being arranged to reflect the light rays of the left and right eye images respectively onto opposing faces of the triangular prism, the triangular prism being arranged to redirect said incident light rays towards the camera lens whose axis is at  $90^\circ$  to the direction of view of the first and second reflecting elements.

5. (Withdrawn) An apparatus as claimed in Claim 3, which includes variable convergence adjustment means, so that the convergence of the optical axes of the left and right eye images can be varied in a manner substantially consistent with the convergence function of natural eyes.

6. (Withdrawn) An apparatus as claimed in Claim 5, in which the convergence adjustment means comprises a mechanism for varying the angle at which the first and second reflecting elements are set in relation to the direction of view and consequently to the axes of the third and fourth reflecting elements.

7. (Withdrawn) An apparatus as claimed in Claim 6, in which the first and second reflecting elements are interconnected by a mechanical linkage, such that the

first and second reflecting elements are constrained to being arranged at the same angle of convergence relative to the direction of view.

8. (Withdrawn) An apparatus as claimed in Claim 3, which includes variable inter-ocular adjustment means arranged to adjust the distance between the image axes of the said first and second reflecting elements such that they are separated by a distance substantially consistent with the average inter-ocular distance of human eyes.

9. (Withdrawn) An apparatus as claimed in Claim 3, which includes an optical element arranged to extend the horizontal angle of view of the apparatus, the optical element comprising a pair of optically identical first lenses or lens groups of negative optical power, each first lens or lens group being located along the respective axes of the left and right eye images and in front of said first and second reflecting elements.

10. (Withdrawn) An apparatus as claimed in Claim 9, in which the optical element also comprises a second lens or lens group of positive power, located along the axis between the camera lens and third and fourth reflecting elements such that both left and right eye images are incident on the second lens or lens group.

11. (Withdrawn) An apparatus as claimed in Claim 9, in which the first lens group comprises a pair of individual halves of an optical element, each half optical

element being placed in front of said first and second reflecting elements in correct alignment with the optical axis of the camera lens.

12. (Withdrawn) An apparatus as claimed in Claim 11, in which both halves of the first optical element are coupled to convergence adjustment means, so that operation of the convergence adjustment means causes adjustment of the two halves of the first optical element.

13. (Withdrawn) An apparatus as claimed in Claim 1 when attached to the front of a video camera having a flip-out screen, the apparatus including a viewing device attached to the flip-out screen enabling the viewer to see a three-dimensional image during recording or playback.

Claims 14-20 (cancelled)

21. (New) A stereoscopic attachment for a camera or projector for providing left and right eye images with a horizontal axis of view of approximately  $45^\circ$  along the axis of a single camera lens, the apparatus comprising:

optical means arranged to provide said left and right images as a pair of head-to-head or toe-to-toe images such that the left and right eye images are simultaneously recorded as a composite image onto a single frame of a recording medium;

said optical means including two reflecting elements for each of the two images respectively with the reflecting elements being positioned in front of a camera lens;

said reflecting elements including first and second reflecting elements arranged to receive the left and right eye images respectively and further including third and fourth reflecting elements arranged to receive said left and right eye images from said first and second reflecting elements to provide said left and right eye images along the axis of a camera lens whose axis is set at  $90^\circ$  to the direction of view of said first and second reflecting elements;

said first and second reflecting elements comprising first and second plane mirrors and said third and fourth reflecting elements comprising two smaller plane mirrors positioned adjacent to each other;

said first and second plane mirrors each being arranged to reflect the light rays of the left and right eye images respectively onto the smaller plane mirrors which are arranged to reflect the incident light rays towards said camera lens;

an optical element arranged to extend the horizontal angle of view of the apparatus, the optical element comprising a pair of optically identical first lenses or lens groups of negative optical power, each first lens or lens group being located along the respective axes of the left and right eye images and in front of the said first and second reflecting elements;

the optical element also comprising a second lens or lens group of positive power located along the axis between the camera lens and the third and fourth

reflecting elements such that both the left and right eye images are incident on the second lens or lens group;

both parts of the optical element being coupled to a convergence adjustment means so that operation of said convergence adjustment means causes adjustment of the two parts of said optical element; and

a viewing device comprising a viewing box into which said composite image is projected, the viewing box having a wall and one or more reflective surfaces that are arranged to project the left and right eye images onto said wall, the viewing box further comprising a viewing window through which said projected composite image may be viewed.